BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the PUBLIC UTILITIES COMMISSION Instituting a Proceeding to Investigate the Implementation Of Feed-in Tariffs	)	PUC DOCKET NO. 2008-0273

SOPOGY, INC. RESPONSES TO INFORMATION REQUESTS FROM THE NATIONAL REGULATORY RESEARCH INSTITUTE

AND

CERTIFICATE OF SERVICE

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SOPOGY, INC. RESPONSES TO INFORMATION REQUESTS FROM THE NATIONAL REGULATORY RESEARCH INSTITUTE

SOPOGY, INC., a Delaware corporation ("**Sopogy**"), respectfully submits to the State of Hawaii Public Utilities Commission (the "**Commission**") its Responses to Information Requests from the National Regulatory Research Institute ("**NRRI**"), issued to the parties in the above docket under cover of the Commission's letter, dated August 3, 2009.

Respectfully submitted.

DATED: Honolulu, Hawaii, August 12, 2009.

PAMELA ANN JOE, ESQ.
VP of Public Policy and General Counsel
Sopogy, Inc.

Responses to Information Requests from the National Regulatory Research Institute

1. **During the course of the hearing and in submittals, certain parties described the difficulty in monetizing state tax credits. The Commission asks for a detailed explanation, citing the specific tax statutes of the tax credits that developers cannot often monetize. If the tax credits are use for some projects, such as residential solar PV installations, but not others, please specify which projects the specific available tax credits are or are not frequently available for and why.**

Sopogy Response:

The State of Hawaii renewable energy tax credits ("**RETC**") are generally more difficult to monetize in the development of utility-scale power generation projects proposed to be financed, in whole or in part, by financiers who are not State of Hawaii income taxpayers or who otherwise have no State of Hawaii income tax liability. During this most recent 2009 State of Hawaii Legislative session, the Legislature attempted to address this monetization challenge by enacting Act 154 which makes the RETC partially refundable. Due to the narrow language of the RETC statute and Act 154, however, the difficulties are not entirely resolved.

Hawaii Revised Statutes ("**HRS**") Section 235-12.5 provides for renewable energy tax credits ("**RETC**") for solar and wind energy systems. Specifically, HRS Section 235-12.5 allows each "individual or corporate taxpayer that files and individual or corporate net income tax return" to claim an income tax credit equal to the lesser of (i) thirty-five percent (35%) of the cost of a solar energy system and twenty percent (20%) of the cost of each wind-powered energy systems, or (ii) $500,000 per commercial system.

By way of example, a utility-scale 1MW solar project comprised of a single "solar system" that costs $7MM could generate a state tax credit of 35% x $7MM = $2.45MM, but for the RETC cap of $500,000 per "solar system." As a result, the applicable RETC for this project is equal to 7%. To calculate the true economic value of state tax credits, however, the resulting RETC amount must also be "federally tax-affected" -- that is, the state tax credit must be reduced by the taxpayer's federal tax rate. Assuming the taxpayer in this example has a 38% federal tax rate, the true effective tax credit would be $500,000 x (1 - 38%) = $310,000, or a true effective tax credit of 4.4%.

By way of contract, assuming a solar project is engineered and sized to maximize the RETC, as most smaller photovoltaic systems are – i.e. taxpayers are able to take a tax credit equal to thirty-five percent (35%) of the full cost of the project (rather than a lesser credit equal to the $500,000 credit cap per system), the effective tax credit would be 35% x (1- 38%) = 21.7%.

As an aside, the current structure of the RETC does not, however, always compliment the efficiencies of scale often applicable to these types of solar projects, and thus, projects engineered to maximize the RETC may not achieve the most efficient renewable energy production – a result which ultimately compromises the State's benefit from the RETC incentive.

To further complicate the RETC benefit, HRS Section 235-12.5 continues to provide that only an "individual or corporate taxpayer who files and individual or corporate net income tax return", HRS § 235-12.5, may claim the RETC and/or related refund amount. As such, the RETC incentives continue to be unavailable to "local" investors who do not file income tax returns in Hawaii and those investors with no presence in Hawaii who do not wish to file Hawaii income tax returns in Hawaii.

Prior to this most recent 2009 Hawaii State Legislative Session, numerous project developers had difficulty identifying "local" investors with sufficient state tax liability to capitalize on the then non-refundable RETC, also known as monetizing the RETC. In fact, in 2008 and 2009, developers cancelled a number of significant photovoltaic (PV) solar projects after investment raising campaigns failed to raise sufficient "local" financing. In other cases, project developers were forced to charge the project's customer higher power prices to ensure sufficient economic return for the project's investors since the RETC was not monetizable.

During the 2009 State of Hawaii Legislative Session, the State of Hawaii Legislature enacted Act 154, which amends HRS Section 235-12.5 to allow for a partial refund of the RETC for taxpayers without sufficient income tax liability. Act 154 provides that "for solar energy systems, a taxpayer may elect to reduce the eligible credit amount by thirty percent and if this reduced amount exceeds the amount of income tax payment due from the taxpayer, the excess of the credit amount over payments due shall be refunded to the taxpayer; provided that tax credit amounts properly claimed by a taxpayer who has no income tax liability shall be paid to the taxpayer . . . ." 2009 Haw. Sess. Laws, Act 154.

In order to calculate the net effective tax credit if taken as a refund rather than as an offset against a tax liability, the RETC must first be reduced by thirty percent (30%) as follows: 35% x (1 – 30%) = 24.5%. Additionally, refundable credits are considered income to a taxpayer pursuant to HRS Section 235-2.3 and 26 USCA Sections 61 and §111, and thus the benefit is further reduced by the combined federal (assuming 38%) and state (assuming 8%) tax rates. Accordingly, the effective refundable RETC benefit to a recipient who claims the entire RETC as a refund is 24.5% x (1 – 38%) x (1 – 8%) = 13.97%.

As demonstrated above, although the RETC headlines a thirty-five percent (35%) income tax credit, the actual net effective tax credit is substantively lower. The recent amendment to HRS Section 235-12.5 enabling RETC refundability attempts to solve some of the monetization difficulties by making a portion of the RETC amount available to Hawaii income return filers who cannot utilize state tax credits, but does so only in part, as the amendment further decreases the RETC's economic value to those investors claiming the refund. Further, Act 154 did not affect the narrow language of the statute that limits the parties who may take advantage of the RETC, thus making the incentive unavailable altogether to significant groups or prospective renewable energy investors.

2. The Commission is evaluating FiT rates that are non-levelized. Like levelized rates, such rates would provide projects recovery of their costs and a reasonable rate of return. Non-levalized rates would increase over time based on a predetermined

discount or inflation rate. Pages 27 through 29 of Haiku Design and Development's opening brief describe and illustrate such an approach.

The Commission requests that the parties provide feedback on whether such rates, if they provide the same level of compensation (when adjusting for the time value of money) would be practicable for developers. In particular, could debt and equity financing structures accommodate rates that provide lower compensation early on and more compensation later, reducing early cash flow? Would doing so increase the overall required FiT compensation?

Sopogy Response:

While it may be possible for varying financing strategies and structures to accommodate non-levelized FiT rates based upon pre-determined escalation rates, such a structure would likely introduce an added layer of complexity to a developer's project financing analysis, result in increased difficulties in obtaining project financing and result in higher project costs overall due to increased investment risk. On the other hand, to the extent the discount rate applied to the non-levelized FiT is consistent with that of certain finaciers and the rate sufficiently compensatory such that those financiers may still realize their expected returns at the front-end of the project, a non-levelized FiT could be favorable to a project developer, as developers typically face increasing project operation and maintenance costs over time and collect tail-end project benefits.

It is difficult to generate a direct comparison of levelized versus non-levelized FiT rates because a number of assumptions must be made in order to calculate the comparison and these assumptions are ultimately financier-specific and vary with each project's unique characteristics. In general, however, a developer must bring the applicable expected cash stream to present value. Net present value ("**NPV**") calculations are common in the industry, but discount rates vary due to the differences in weighted average cost of capital ("**WACC**") of different financiers. If a non-levelized FiT rate is instituted, the PUC must select a discount factor, which could range from 6% to over 18%, to calculate the equivalency between levelized and non-levelized rates. Due to the variations of discount rates utilized by different financiers, the NPV of an expected income stream under a non-levelized FiT will differ for each analyzing party. As such, unless the discount factor applied by the PUC to a non-levelized FiT is identical to that of an analyzing developer or financier, the NPV of a proposed levelized FiT over time versus that of a proposed non-levelized FiT over the same period of time will be more favorable to certain parties than others.

Assuming, however, that the discount rate selected for an implemented non-levelized FiT is consistent with that of a financier, this FiT structure could still introduce added difficulties in securing project financing. Outside financiers are accustomed to front-loaded returns over a set period of time based upon a combination of federal tax and depreciation incentives, state tax credits (if any) and the corresponding power purchase returns during these early project years. If FiT rates are designed to delay economic benefits until later in a project's life, it will take a longer period of time for investors to realize their expected returns, thus increasing the project risk for an outside investor. Moreover, if current federal and state incentives are decreased or

eliminated, the investor payout period will be drawn out even further, thus further exposing investors.

These cumulative impacts could necessitate fundamental changes to the traditional "flip" financing structure which has been customarily employed by renewable energy project developers and financiers. This potential effect to customary finance structure and an investor's projected payout period, in addition to the general increased complexity and risk of this approach, will almost certainly result in a higher cost of construction capital for these projects, demands by investors for added and/or premium rights, warranties and/or insurance, and ultimately, financiers investing in other non-Hawaii projects.

On the other hand, in those cases where the non-levelized FiT offers initial rates such that financiers can realize their expected returns in a relatively short period of time at the front-end of the project, a non-levelized FiT could be favorable to a project developer. Generally, operating and maintenance expenses of renewable energy projects increase over time (partially due to wage inflation), and given a richer tail-end revenue stream, developers who typically collect the later project benefits could potentially realize a greater margin.

In conclusion, while there may be good reason for implementation of a non-levelized FiT related to ratepayers and escalating avoided costs, such an approach will likely not be without impact to the ability of developers to secure project financing. The end result could be an increase to the total installed costs of renewable energy facilities in the state and a fewer number of projects installed overall, thus producing a higher longer-term the base cost of non-fossil fuel energy generation in general and less diversity in and impact of in the independent renewable energy generation market.

CERTIFICATE OF SERVICE

I hereby certify that I have on this date served a copy of the Responses to Information Requests from the National Regulatory Research Institute upon the following parties, by causing a copy hereof to be e-mailed, or mailed, U.S. postage prepaid, and properly addressed to each such entity.

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